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MOFFETT FIELD  
SSIC NO. 5090.3

**DEPARTMENT OF THE NAVY**  
SOUTHWEST DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
1220 PACIFIC HIGHWAY  
SAN DIEGO, CA 92132-5190

5090  
Ser 06CH.AM/0826  
August 8, 2001

Ms. Carmen White  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street, SFD-8-1  
San Francisco, CA 94105-3901

Ms. Adriana Constantinescu  
Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Dear Ms. White and Ms. Constantinescu:

In accordance with the Federal Facility Agreement submittal schedule, I am pleased to submit the Response to Comments on the draft Record of Decision (ROD) for the Site 22 landfill at Moffett Federal Airfield, CA. Thank you for providing comments on the draft ROD and I look forward to discussing the Response to Comments with you at the BCT meeting on August 9. In order to maintain the schedule, I would like to resolve any comments or questions regarding the responses by August 13. As always, if you have any questions, please do not hesitate to contact Wilson Doctor or myself in any of the following ways:

Ms. Andrea Muckerman  
BRAC Environmental Coordinator  
Southwest Division  
Naval Facilities Engineering Command  
BRAC Operations Office  
1230 Columbia Street, Suite 1100  
San Diego, CA 92101-8517

Telephone: (619) 532-0911  
Facsimile: (619) 532-0995  
muckermanam@efdswnavfac.navy.mil

Mr. Wilson Doctor  
Remedial Project Manager  
Southwest Division  
Naval Facilities Engineering Command  
BRAC Operations Office  
1230 Columbia Street, Suite 1100  
San Diego, CA 92101-8517

Telephone: (619) 532-0928  
Facsimile: (619) 532-0995  
doctorwe@efdswnavfac.navy.mil

Sincerely,

  
ANDREA MUCKERMAN  
BRAC Environmental Coordinator,  
By direction of the Commander

Enclosure: 1. Response to Comments

5090  
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August 8, 2001

Copy to:

Dr. Sonce DeVries  
U.S. EPA Region 9, SFD-8-2  
75 Hawthorne Street  
San Francisco, CA 94105

Dr. Lynn Suer  
Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Mr. David Cooper  
U.S. EPA Region 9, SFD-3  
75 Hawthorne Street  
San Francisco, CA 94105

Mr. Clarence Callahan  
U.S. EPA Region 9, SFD-8-2  
75 Hawthorne Street  
San Francisco, CA 94105

Ms. Hilary Waites  
TechLaw, Inc.  
530 Howard Street, Suite 400  
San Francisco, CA 94105

Mr. Jacques Graber  
California Integrated Waste Management Board  
8800 Cal Center Drive  
Sacramento, CA 95826

Mr. Dennis Mishek  
Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Mr. Chris Rummel  
Department of Environmental Health  
Santa Clara County  
PO Box 28070  
San Jose, CA 95159-8070

Mr. Jim Hardwick  
California Department of Fish and Game  
Office of Spill Prevention and Response  
1700 K Street Suite 250  
Sacramento, CA 95814

Ms. Laurie Sullivan  
NOAA  
c/o EPA Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

Mr. Jim Haas  
U.S. Fish and Wildlife Service  
2800 Cottage Way Suite W2605  
Sacramento, CA 95825

Ms. Sandra Olliges  
National Aeronautics and Space Administration  
Ames Research Center MS 218-1  
Moffett Field, CA 94035

Mr. Don Chuck  
National Aeronautics and Space Administration  
Ames Research Center MS 218-1  
Moffett Field, CA 94035

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Writer: W. Doctor, 06CH.WD, 2-0928

Typist: N. Lilley, 06BU.NL, 08/08/01

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**ENVIRONMENTAL PROTECTION AGENCY (EPA) COMMENTS  
ON THE DRAFT RECORD OF DECISION  
FOR SITE 22 LANDFILL, REVISION 0  
MOFFETT FEDERAL AIRFIELD,  
MOFFETT FIELD, CALIFORNIA  
DELIVERY ORDER NO. 0088**

**DRAFT RECORD OF DECISION, SITE 22 LANDFILL**

Document dated: May 21, 2001

Comments by: Ms. Carmen White

Responses by: Naval Facilities Engineering Command, Southwest Division

**GENERAL COMMENTS**

**Comment 1:** The ROD states that landfill leachate is not in open communication with groundwater (Section 5.1.4) and that no direct pathways from the landfill leachate to surface water have been defined (Section 5.3.2), but does not present enough information for the reader to understand the path of migration or ultimate fate of landfill leachate. The ROD also indicates that the combination of precipitation and irrigation on the landfill equal 31 inches per year, but the fate of this water is not clear. In order to support the conclusion that landfill leachate is not in communication with groundwater or surface water, the ROD should describe where the combined precipitation and irrigation water goes, other than to groundwater (e.g., evaporation, ground surface, etc). Please revise the ROD to describe the paths of migration of water and/or leachate from the landfill to account for 31 inches of inflow to the landfill per year. Suggest summarize hydrogeology information from the 1998 Feasibility Study (FS).

**Response 1:** The hydrogeological data available from prior studies has been reevaluated by the Navy and based on this review, the ROD will be revised to support and consistently refer to a "perched" groundwater situation, whereby the higher water level elevations within the landfill are due to water that is perched within the landfill materials. Therefore, there is no mechanism to "drive" leachate out of pore spaces in the landfill material and this eliminates the possibility of communication between landfill leachate and shallow groundwater. This statement is based on the results of a water balance evaluation conducted using the HELP model provided in Attachment H of the FS, which indicates evapotranspiration rates greater than the estimated 31 inches per year of combined irrigation and precipitation. The "perched" water situation also alleviates the potential for radial flow to surrounding groundwater. Sections 5.1.4 and 5.3.2 will be revised accordingly.

**Comment 2:** In the Declaration Statement for Site 22 on Page i, the Draft Record of Decision, Site 22 Landfill (ROD) states that the United States Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) concur with the selected remedy; however, the DTSC is not listed as one of the authorizing signatures on Page iv. If the DTSC concurs with the selected remedy and is authorized to sign this ROD, please add a signature block for the DTSC representative to Page iv. If the DTSC will not sign the ROD, please eliminate the reference to the DTSC from Page i or provide the rationale for why the DTSC will not sign the ROD.

**Response 2:** The DTSC will not sign this ROD, as state concurrence will be provided by the RWQCB. The reference to the DTSC was eliminated from Page i.

**Comment 3:** The ROD does not consistently state that the selected remedy is protective of human health *and* the environment. For clarity, please revise all applicable sections of the ROD to consistently state that the selected remedy is protective of human health *and* the environment, if appropriate.

**Response 3:** Applicable sections were revised appropriately.

**Comment 4:** A detection monitoring program is proposed as part of the selected remedy described in the ROD. The ROD should provide the following information to better describe the proposed monitoring program: groundwater flow direction, contaminants of concern, and cleanup levels. Furthermore, the ROD should refer to a long-term groundwater monitoring plan.

**Response 4:** The framework for the detection monitoring program and appropriate CCR references are provided in the ROD. The groundwater monitoring program will be referred to as a long-term groundwater monitoring plan. The plan will be further explained in this document, and the final details (approach for establishing concentration limits, monitoring frequency, etc.) will be established in a subsequent plan to be developed for approval of the regulatory agencies. It is noted that EPAs reference to cleanup levels is interpreted as concentration limits, as no groundwater remediation is necessary per the RAOs for the Site. The constituents of concern to be monitored for will be listed in the ROD and will consist of the constituents detected during the previous groundwater monitoring activities for the site as identified in the FS.

**Comment 5:** The ROD refers to a landfill gas monitoring program. For completeness, please revise the ROD to provide the following information: contaminants of concern and criteria that will trigger further actions (e.g., when dangerous methane gas concentrations are detected within the landfill). Furthermore, the ROD should refer to a long-term landfill gas monitoring plan.

**Response 5:** The framework for the landfill gas monitoring program and appropriate CCR references are provided in the ROD. The landfill gas monitoring program will be referred to as a long-term landfill gas monitoring plan. The plan will be further explained, and the final details (constituents of concern, action levels, etc.) will be established in a subsequent plan to be developed for approval by the regulatory agencies.

**Comment 6:**           **The concentrations tables in the ROD do not include the detection limits for the compounds listed. To allow for evaluation of non-detect results, please provide the detection limits on the tables. In addition, to allow for evaluation of detected concentrations, please add applicable cleanup levels and the sample date to the tables.**

**Response 6:**           As referenced on the individual tables, these tables were obtained from the FS, which was prepared by another Navy contractor. Detection limits for the various analytes were not available since they were not presented in the FS. Sample dates have been provided in the notes. AWQC were already given for the groundwater and leachate data (Tables 8-12). For soils, methodology used in the risk assessment did not include screening of chemical concentrations against cleanup levels, and therefore, addition of cleanup levels to the ROD would be inconsistent with the accepted approach.

**SPECIFIC COMMENTS (Ms. Carmen White)**

**Comment 1:**           **Assessment of the Site, Page i: The statement in the ROD regarding the existence of a release or substantial threat of a release of hazardous substances into the environment lacks clarity. The standard language proposed in the Guidance is “The response action selected in this Record of Decision is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.” For clarity and ease of understanding, please revise the ROD to adhere to the standard language proposed in the Guidance.**

**Response 1:**           The Navy feels that the standard language proposed in the Guidance is too broad in this case, and could be misinterpreted. The Navy prefers to retain the statement as originally presented, which clarifies the specific problems for which the remedy is being certified.

**Comment 2:**           **Description of the Selected Remedy, Page ii: This section does not include the following components as outlined in the Guidance: A description of how the action fits into the overall site management plan (given that the action is one of several operable units), the intended sequence and timing of the operable units, and the identification of the selected performance standards. Please revise the ROD to include these components.**

**Response 2:**           Site 22 does not contain multiple operable units. In addition, the proposed remedy for Site 22 is not related to remedies for other operable units at MFA (i.e. contaminants from Site 22 do not impact cleanup actions or investigations at other OUs). Therefore, a description of how the action fits into an overall site management plan, and the intended sequence and timing of the Site 22 remedy, is not relevant to other OUs at MFA. The performance standard is identified as preventing existing and future exposure to buried refuse through adoption of institutional controls, preventing burrowing of animals, and minimizing erosion. A brief description of the base-wide management plan is provided in Section 4.0.

**Comment 3:** **ROD Certification Checklist, Page iii:** The first bullet states that the Decision Summary of the ROD includes “chemicals of concern and their respective concentrations”. However, this information is not provided in the ROD. For clarity, provide a list of chemicals of concern and their respective concentrations. In addition, it would be helpful if the certification checklist included page numbers indicating where the listed information can be found in the ROD, as suggested in the Guidance.

**Response 3:** The first bullet has been changed to indicate that the Decision Summary of the ROD includes “chemicals of *potential* concern and their respective concentrations,” as the risk assessment did not identify any chemicals of concern. The identified COPCs are given in Tables 14-15, and all chemical concentrations are provided in Tables 1-12, and Figures 5-8.

**Comment 4:** **Section 2.0, Page 2-2:** The ROD states that exploratory trenching uncovered municipal waste such as old tires, newspapers, vacuum tubes, and shampoo bottles; however, the Draft Site 22 Post-Remedial Action Monitoring Plan states that “the landfill received wastes generated from domestic aircraft maintenance and other military operations, such as scrap equipment, construction debris, paint and paint thinners, solvents, lacquer, asbestos, waste oil and transformer oil, jet fuel, fuel and transformer filters, and sawdust contaminated with polychlorinated biphenyls (PCBs)”. For clarity and completeness, please revise the ROD to include a description of all types of materials that may have been disposed of at Site 22.

**Response 4:** As with many former landfill sites operated and closed prior to the 1970s, the site may have received some of these wastes, however, the landfill is believed to contain mainly domestic waste which is consistent with exploratory trenching conducted at the site as well as with remedial investigations, which did not reveal significant impacts from these compounds.

**Comment 5:** **Section 3.0, Page 3-1:** The third paragraph refers to the final Proposed Plan for Site 22 Landfill; however, the Proposed Plan is not included in the list of references. For completeness, please add the Proposed Plan to the reference list.

**Response 5:** The text was revised as requested.

**Comment 6:** **Section 4.0, Page 4-1:** The second paragraph only states that the selected remedy “will prevent burrowing animals from disturbing the waste, thereby minimizing human exposure to contaminated material”. However, the other components of the remedy (groundwater and landfill gas monitoring, surface water management and erosion control, and institutional controls) are not mentioned. Since the remedy consists of several components besides the installation of a biotic barrier (as described in p. ii), please revise the ROD to include a comprehensive description of the selected remedy. Additionally, this section does not include the following components as outlined in the Guidance: the scope and role of the operable unit within the overall site management plan, the planned sequence of actions, and the authorities under which each

**action will be/has been implemented (e.g., removal, remedial, State). Please revise the ROD to include these components.**

**Response 6:** The text was revised to include a comprehensive description of the selected remedy. Regarding the second component of this comment, the overall base-wide strategy is given in the last paragraph on Page 4-1. Since Site 22 does not contain multiple operable units, and only one remedial action is planned at the site, there is no “overall site management plan” for Site 22 in the sense that would require coordination of a related sequence of multiple remedial actions. In addition, the action at Site 22 does not impact other sites (OUs) within MFA, and coordination of the activities at Site 22 with other MFA sites is not needed.

**Comment 7:** **Section 5.1.1, Page 5-2: The ROD refers to a document prepared by Foster-Wheeler Environmental Corporation entitled “Pre-Draft Annual Groundwater Report for 1999 and 2000 including August 2000 and November 2000 Quarterly Reports, Revision 0” dated May 2001, for detailed aquifer descriptions. However, since this document was not submitted to the regulatory agencies for review, this reference should be deleted from the ROD.**

**Response 7:** The draft version of the document was submitted to EPA on June 29, 2001, and the final version (if completed and submitted) will be cited in the revised and subsequent versions of the ROD.

**Comment 8:** **Section 5.1.2, Page 5-2: This section does not include a description of groundwater flow direction within each aquifer and between aquifers, and groundwater discharge locations as required by the Guidance. Please revise the ROD to include a description of groundwater flow direction.**

**Response 8:** The requested information is presented in the *Draft First Annual Report for WATS and EATS*, Revision 0 dated 29 June 2001, and pertinent information from this report will be included in the revised and subsequent versions of the ROD.

**Comment 9:** **Section 5.1.2, Page 5-2: This section identifies a laterally discontinuous permeable zone between 11 and 16.5 feet below mean sea level (msl). The water in this zone is apparently what is referred to as “groundwater” throughout the remainder of the ROD; however, in the previous section six aquifer zones are defined for the region and the C aquifer is described as being used for agriculture and drinking water. It appears that the ROD statement that there are no beneficial uses for groundwater at Site 22 refers to the upper aquifers only, since the 1998 Feasibility Study (FS) (section 1.3.3 Hydrogeology, p.12) states that lithology within the Site 22 area is not known approximately 45 feet msl. If the statement only refers to the upper aquifers, please revise accordingly. Alternatively, clarify the relationship of Site 22 groundwater to the six aquifers in the region and provide evidence that Site 22 groundwater does not communicate with the deeper aquifers in the region or with areas of the A and B aquifers that meet State Water Resources Control Board (SWRCB) and EPA criteria for potential drinking water sources.**

**Response 9:** The comment is correct inferring that the groundwater in the zone between 11 and 16.5 feet below msl is within an upper aquifer, specifically within the A1 aquifer zone as defined in the *Draft First Annual Report* cited in the response to Specific

Comment 8. Information in this report, which will be included in the revised and subsequent versions of the ROD, describes the continuous confining layer separating the B and underlying C aquifers beneath the site, and the regional upward hydraulic gradient from the C aquifer to the B aquifer. Aquifers beneath the site are hydraulically connected to portions of the A and B aquifers south of the site to which criteria for potential drinking water sources apply. However, the site is hydraulically downgradient of these southern portions of the aquifer. Given that groundwater moves downgradient and not upgradient, groundwater from the site cannot communicate with groundwater in the southern portions of the aquifer.

**Comment 10:** Section 5.1.2, Page 5-2: This section states that a laterally discontinuous permeable zone is typically encountered between 11 and 16.5 feet below msl (about 9 to 16.5 feet below ground surface (bgs)). This statement implies that the ground surface at Site 22 is at or slightly below sea level (msl); however, the lithologic cross-sections shown in Figures 14, 15, and 16 show the Site 22 landfill as a mound rising about 8 feet above sea level. Please revise the ROD to clarify the topography of Site 22 and the relationship of the ground surface elevation to subsurface features. In addition, please describe the depth and thickness of landfill material and the relationship of landfill surface and bottom elevations to the water table elevation to support the statement that 5 feet of landfill refuse is below the water table.

**Response 10:** The depths of 9 to 16.5 feet bgs cited in the comment are below the ground surface adjacent to the landfill, not below the landfill surface itself. Ground surface elevation in the area of the landfill is indeed at or slightly below msl as noted in the comment. The ground surface elevations at or slightly below msl are illustrated in the cross-section in Figures 14, 15, and 16 in the draft ROD. The revised ROD will describe the depth and thickness of landfill material and the relationship of landfill surface and bottom elevations to the water table elevation as requested in the comment.

**Comment 11:** Section 5.1.2, Page 5-3: The first paragraph on this page states that the water table in the Site 22 area is encountered between 1 and 5 feet bgs. In Section 5.1.4 the ROD states that groundwater in the landfill can be mounded above surrounding groundwater by as much as 7 feet. If these two statements are true, groundwater in the landfill can be mounded 2 feet above the ground surface. For clarity, please describe the water table in terms of elevation in addition to depth bgs. In addition, please clarify the water table elevations with respect to the topography of Site 22, including the landfill area.

**Response 11:** As noted in the response to General Comment 1, groundwater in the landfill is perched and not mounded. Statements in the Draft ROD referring to a “groundwater mound” are incorrect and will be modified or removed from the revised versions of the ROD. Depth to groundwater bgs and water table elevations (without a mound) with respect to topography of the site will be clarified in the revised versions of the ROD.

**Comment 12:** Section 5.1.3, Page 5-3: This section concludes that there is no communication between groundwater and surface water features such as the North Patrol Road Ditch, because during times of low stormwater runoff, there is not water flowing in the ditch. However, the FS (section 1.3.3 Hydrogeology, p.12) states

**that shallow groundwater is in hydraulic communication with surface water, based on chemical comparisons of water samples from wells and the Northern Channel. Please revise the ROD to clarify that shallow groundwater is in communication with surface water.**

**Response 12:**

Cross-section A-A' in Figure 14 of the Draft ROD shows the water table at the east end of the profile at a slightly higher elevation than the water level in the patrol road ditch. Given this, it would be expected that groundwater would discharge to the ditch. However, lithology of water bearing materials penetrated by the ditch is shown on the cross-section as relatively impermeable clay and clayey silt. The ROD will be revised to indicate that while groundwater is at a higher elevation than water in the ditch, hydraulic communication between groundwater and surface water is impeded by the relatively low hydraulic conductivity of clay/silty clay unit in which the water table occurs. The revised version of the ROD will note that absence of water flowing in the ditch during times of low stormwater runoff is a result of this impeded hydraulic connection.

**Comment 13:**

**Section 5.1.4, Page 5-4: This section states that communication between the “perched leachate” and shallow groundwater is limited due to clay and clayey silt beneath and around the landfill; however, the next sentence states that *groundwater* in the landfill can be mounded above surrounding groundwater by as much as 7 feet. Please revise the ROD to clarify that the water mounded in the landfill is landfill leachate or perched groundwater and not shallow groundwater. The section goes on to discuss results from “perimeter wells” and “leachate wells”. Please revise the ROD to clarify that the two wells within the landfill are completed within the landfill material above the clay layer and are monitoring *landfill leachate or perched groundwater* and not shallow groundwater. Finally, since the permeable zone occurs from 11 to 16.5 feet below mean sea level (msl) and the water table is encountered between 1 and 5 feet below ground surface (bgs), it appears that groundwater occurs under confined conditions. Please revise the ROD to clarify that the conclusion that landfill leachate is not in communication with groundwater is supported by water chemistry analysis, as explained in the FS section 1.3.3 Hydrogeology pp.13-14.**

**Response 13:**

As indicated in responses to preceding comments, EPA's contention that groundwater in the wells within the landfill is perched, separated from the water table by unsaturated material, and therefore not in direct hydraulic communication with “shallow groundwater” is correct. The revised versions of the ROD will clarify information as requested in the comment.

**Comment 14:**

**Section 5.2, Page 5-5: This section states that a very recent survey identified no owls, and 7 or 8 active squirrel burrows at Site 22. Since the burrowing owl population varies seasonally, please revise the ROD to indicate the month and year that the “much more recent” survey was conducted.**

**Response 14:**

The statement was removed. The ROD states that owls will be relocated in accordance with appropriate regulatory (California Department of Fish & Game) guidance to minimize impacts to existing populations. Details will be provided during the RD/RA phase.

**Comment 15:** Section 5.3, Page 5-5: The ROD states that soil samples were analyzed for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), pesticides, Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH) and metals; however, the Final Station-wide RI Report indicates that Phase II soil samples were also analyzed for radioactivity. Please revise the ROD to include a summary of results of radioactivity analyses.

**Response 15:** The ROD was revised as requested.

**Comment 16:** Section 5.3.2, Page 5-7: This section describes four rounds of groundwater samples collected from four wells surrounding the landfill and two wells within the landfill (WGC2-2 and WGC2-3). Since the ROD concludes that landfill leachate is not in open communication with the surrounding groundwater, please revise the ROD to describe these two wells consistently throughout the ROD as “landfill leachate or perched groundwater” wells and samples collected from these wells as “leachate or perched groundwater” samples rather than groundwater samples.

**Response 16:** The ROD was revised to say “no communication,” and also revised to indicate that “leachate or perched groundwater” samples rather than groundwater samples were collected from WGC2-2 and WGC2-3.

**Comment 17:** Section 5.3.2, Page 5-7: The second paragraph on this page concludes that monitoring wells considered upgradient of Site 22 may receive groundwater moving from the higher, perched landfill leachate, and no distinct upgradient location exists at the perimeter of the landfill. This statement contradicts the conclusion in Section 5.1.4 that “the landfill leachate is not in open communication with the surrounding groundwater.” If the landfill leachate is not in open communication with the surrounding groundwater, then an upgradient (and downgradient) location should be defined in order to evaluate the impact of the landfill on groundwater. If an upgradient direction can't be identified then the conclusion in the ROD that the landfill leachate is not in open communication with the surrounding groundwater should be removed. Please revise the ROD to define upgradient and downgradient locations at Site 22 or eliminate the conclusion that landfill leachate is not in open communication with the surrounding groundwater.

**Response 17:** The revised versions of the ROD will identify upgradient and downgradient directions from the landfill based on groundwater contours presented in the FS. Landfill leachate is perched and not in communication with groundwater. Cross-section A-A' in Figures 14 of Draft ROD shows landfill material below the water table projected from groundwater elevations at wells adjacent to (and not within) the landfill. It is this material that is referred to on Page 5-9 of the Draft ROD as the origin of sporadic detections of organic constituents in perimeter wells.

**Comment 18:** Section 5.3.3, Page 5-8: The last sentence states that air Solid Waste Assessment Test (SWAT) results indicate that no detectable concentrations of non-methane organic compounds (NMOCs) are migrating to the atmosphere from the landfill and no methane gas is migrating beyond the perimeter of the landfill. However, the text does not state whether methane gas was found to

be migrating to the atmosphere from the landfill. Additionally, the ROD does not describe the composition of the landfill gas. Please revise the ROD to provide a more complete summary of the results of the SWAT tests including composition of landfill gas, concentrations, and migration pathways.

**Response 18:** The discussion will be expanded as requested.

**Comment 19:** Section 5.3.4, Page 5-9: The ROD concludes that organic constituents in perimeter wells may have originated from the landfill due to the presence of *groundwater within the refuse*; however, the ROD has previously concluded (Section 5.1.4) that landfill leachate is not in communication with groundwater. Also, if leachate is not in communication with groundwater, please clarify the route of contaminant migration from the landfill to perimeter wells.

**Response 19:** Landfill leachate detected in wells WCG2-3 and WCG2-2 is perched and not in communication with groundwater, as noted in the comment. Cross-section A-A' in Figures 14 of Draft ROD shows landfill material below the water table projected from groundwater elevations at wells adjacent to (and not within) the landfill. It is this material that is referred to on Page 5-9 of the Draft ROD as the origin of sporadic detections of organic constituents in perimeter wells.

**Comment 20:** Section 5.3.4, Page 5-9: The fourth bullet states that metal concentrations detected in groundwater surrounding the landfill were not significantly different from background concentrations. For clarity and completeness, please revise this bullet statement to indicate that nickel, lead, and zinc concentrations exceeded AWQC in some perimeter wells. In addition, please state what the background concentrations are and how they were determined.

**Response 20:** The bullet was changed as requested. The background concentrations used in the statistical analysis were calculated using *means* from other high TDS locations at MFA. Appendix E from the agency-approved FS explains this evaluation in more detail.

**Comment 21:** Section 6.0, Page 6-1: According to the Guidance, this section is to include a description of adjacent/surrounding land use, and the basis for future use assumptions. Please revise this section to include the above-mentioned information.

**Response 21:** Based on verbal conversations with NASA staff, the long term plans for the site is for it to remain a golf course. NASA is expected to submit future land use documents, which indicate the golf course as the long-term use for the site.

**Comment 22:** Section 7.2, Page 7-2: According to the Guidance, this section should include summary tables listing the occurrence, distribution, and selection of chemicals of concern (COC), ecological exposure pathways of concern, and COC concentrations expected to provide adequate protection of ecological receptors. For completeness, include tables listing the above-mentioned information in the ROD. In addition, revise the ROD to provide a summary of the ecological risk characterization for each COC at Site 22.

**Response 22:** Based on discussions from July 19, 2001, the EPA concurred that this information is sufficiently covered in the existing text based on the fact that the presumptive remedy (containment) is the remedial action. Therefore, based on EPA guidance, quantification of ecological risk is not necessary.

**Comment 23:** **Section 8.0, Page 8-1: According to the Guidance, the remedial action objectives (RAOs) should address risks identified in the risk assessment. The only potential threat at Site 22 was identified as exposure to contaminants due to direct contact with refuse. Three mechanisms were identified in the risk assessment which could cause subsurface disturbance and exposure to refuse: construction, significant erosion, or the activities of burrowing animals. However, the RAO defined in this section addresses only one mechanism: burrowing animals. Please revise this section to include prevention of construction activities (through institutional controls, for example), and prevention of significant erosion (through surface water flow management, for example) to the statement of the RAOs for Site 22.**

**Response 23:** The ROD was revised as requested.

**Comment 23:** **Section 9.2.3, Page. 9-4: The text states that access controls will be included in NASA's land use planning documents. Please describe NASA's land use planning procedures and specify the document or type of document which will contain the access controls.**

**Response 24:** The ROD will be revised to refer to the Navy's intent to enter into an MOA with NASA that will set specific institutional controls for the site; similar to what was done for Sites 1 and 2. The ROD will specify that the MOA will be officially adopted within one year of the Final ROD. The MOA will include the following elements:

- protection of the structural aspects of the landfill cap (biotic barrier);
- prohibition of alterations to the drainage patterns or modification of surface contours;
- establishing specific boundaries for the extent of the landfill;
- prohibition of extraction of groundwater from the site;
- prohibition of residential land use;
- require regulatory approval for consideration of alternative land uses;
- indicate the parties responsible for ongoing operations, maintenance and monitoring activities for the site; and
- refer to how the MOA will be enforced with NASA and with their site-specific tenants.

**Comment 25:** **Section 9.2.5, Page 9-4: The ROD states that shallow landfill gas monitoring points would be installed just above the seasonal low water table, since the water table is between 1 and 5 feet bgs; however, according to Section 5.1.2, the permeable zone is 9 to 16.5 feet bgs and is separated from the ground**

surface by clay and clayey silt (Figures 14, 15, and 16). If groundwater occurs under confined conditions, it is not clear why gas monitoring wells can't be screened to the bottom of refuse. Please revise the ROD to clarify whether groundwater occurs under confined conditions and, if so, please revise the ROD to indicate that wells will be screened to the bottom of refuse as required by Title 27 CCR.

**Response 25:** The specific placement of vapor wells and the determination of the appropriate depths of the screened intervals will be determined during the remedial design phase.

**Comment 26:** **Section 10.2.2, Page 10-5:** This section states that the substantive portions of landfill closure requirements in 40 CFR § 258 would be considered relevant and appropriate because Site 22 received domestic wastes from MFA similar or identical to wastes managed in municipal solid waste landfills, and that provisions in 40 CFR § 258.60 require that the final cover system be designed to minimize infiltration and erosion. This section appears to contradict the information presented in Tables 17 and 18 where only gas and groundwater monitoring provisions of 40 CFR § 258 are deemed relevant and appropriate. Please revise the ROD to clarify whether the cover system design requirements of 40 CFR § 258 are relevant and appropriate.

**Response 26:** Reference to the applicability of the landfill closure requirements of 40 CFR Part 258 will be deleted. However, while infiltration control is not a specific element of the remedy for the site, the biotic barrier will be designed to minimize erosion and infiltration so as not to create additional concerns relating to these issues.

**Comment 27:** **Section 10.3, Page 10-6:** The last sentence of the first paragraph states that "leachate will exist whether a multilayer cap is employed or not because some of the refuse is located below the water table". This statement appears to contradict the conclusion in Section 5.1.4 that landfill leachate is not in communication with surrounding groundwater. Please clarify how the position of the water table influences the formation of leachate if landfill leachate is not in communication with surrounding groundwater.

**Response 27:** The sentence cited in the comment will be revised to: "... (2) there will be landfill material located below the water table whether a multilayer cap is employed or not."

**Comment 28:** **Section 12.2, Page 12-3:** According to the Guidance, a description of the institutional control components of the remedy should be expanded upon in this section. The institutional controls should be described as explicitly as possible. Include: **Objective:** clearly state what will be accomplished through the use of institutional controls. **Mechanism:** describe the specific types of institutional controls that will be used to meet the remedial objectives and the monitoring process/program that will be used to determine the integrity and effectiveness of the institutional controls. **Timing:** when will the institutional controls be implemented and/or secured and how long must they be in place. **Responsibility:** who will be responsible for securing, maintaining and enforcing the control(s). Include a description of the procedures that will be used to report violations or failures of the institutional controls to the

appropriate EPA and/or state regulator and the designated party responsible for reporting. Include a description of the legal authority for enforcement procedure(s), such as state statutes, regulations, ordinances, or other legal authority. Also clarify the method(s) that will be used to provide notice of the institutional controls at the site to subsequent owners or lessees.

In addition, please revise the ROD to include more detail regarding the long-term groundwater monitoring plan, the landfill gas monitoring plan, and the landfill and monitoring wells O&M Plan.

**Response 28:** Please refer to Response to Specific Comment No. 24 for reference to site-specific land use controls. Responses to General Comments No. 4 and 5 refer to groundwater and landfill gas monitoring programs to be developed.

**Comment 29:** **Section 12.2, Page 12-3:** This section states that the groundwater monitoring program will incorporate the substantive provisions of 22 CCR applicable to the development and implementation of a monitoring program; however, details of how the requirements of the relevant sections of 22 CCR will be met are not provided. For example, the ROD does not describe constituents of concern, concentration limits, monitoring parameters, analytical suite, the method for detecting a release, and the method for determining background concentrations that are proposed for Site 22. Also, the ROD states that if monitoring results show no significant impacts, monitoring intervals may be increased or deemed unnecessary, but the ROD does not define what constitutes "significant impacts." Finally, the ROD states that if contaminant concentrations in groundwater exceed levels established in accordance with Title 22 CCR, § 66264.97, the Navy will immediately notify the regulatory agencies, evaluate groundwater contamination in accordance with CERCLA, and obtain concurrence from EPA, RWQCB, and DTSC on remediation decisions. However, the ROD does not define the contaminant concentrations that will trigger these actions or at what concentrations remediation will be deemed necessary. In order for the monitoring program to be meaningful, and for agencies to make appropriate decisions in the future based on monitoring results, the ROD should summarize details of the monitoring program as described above. If this information will be developed at a later date, please clarify when. Consider using Ambient Water Quality Criteria (AWQC) as interim standards.

**Response 29:** Please refer to the response to General Comment 4 above which describes how a groundwater monitoring program will be further explained in the revised versions of the ROD and that final details (approach for establishing concentration limits, etc.) will be established in a subsequent plan to be developed for approval of the regulatory agencies.

**Comment 30:** **Section 12.4, Page 12-4:** According to the Guidance, this section is to include a description of the available uses of land and the time frame to achieve available use, anticipated socio-economic and community revitalization impacts, and anticipated environmental and ecological benefits. Please revise this section to include the information described above.

**Response 30:** Based on discussions with EPA on July 19, 2001, the Navy understands this comment pertains specifically to providing a more detailed description of existing and future land uses, which as previously mentioned will be more fully explained in the revised versions of the ROD.

**Comment 31:** **Section 14.1, Page 14-1: This section states that institutional controls as well as monitoring will be implemented to prevent exposure to contaminated groundwater; however, exposure to contaminated groundwater was not identified as a risk in Section 7.0. Please clarify whether exposure to contaminated groundwater is a concern at Site 22. If not, please remove the above-referenced statement from this section.**

**Response 31:** The statement was deleted.

**Comment 32:** **Figures 3 and 4: Please add the groundwater flow direction to these figures. See Figure 4 from the FS.**

**Response 32:** Figure 3 is intended to be a general Site Plan and providing an indication of groundwater flow direction on this figure may not be appropriate. However, the ROD will be revised to indicate the groundwater flow direction on Figures 7 and 8, which pertain specifically to groundwater monitoring issues.

**Comment 33:** **Figure 3: It appears that the symbol indicating the locations of the proposed gas monitoring wells have no identification (ID) number and are not identified in the legend. Please revise the figure to provide ID numbers for the proposed gas monitoring wells and include an explanation of this symbol in the legend. In addition, one symbol (a small circle with a dot in the center) is shown inside the boundary of the landfill. However, this symbol is not defined in the legend. Please include this symbol in the legend or delete this symbol from the map.**

**Response 33:** To avoid confusion between actual and proposed gas monitoring wells, the Navy is not inclined to provide identification numbers for the proposed wells.

The symbol that is referenced refers to a specific species of tree. The legend for this figure will be revised to include this symbol in the revised ROD.

**Comment 34:** **Figures 5 and 6: Please add the sample date, and applicable soil action levels to the figure (for comparison with the soil concentrations). In addition, please include the analytical laboratory data qualifiers to the legend. Lastly, please explain why no data are listed for sample location SBGC2-6.**

**Response 34:** Sampling dates for the referenced soil and groundwater investigation points are provided in the corresponding data tables. The soil action levels are not applicable (see response to General Comment 6). The laboratory data qualifiers were added to the legend. The data was added for sample location SBGC2-6.

**Comment 35:** **Figures 7 and 8: Please add the sample date and applicable groundwater action levels (i.e., Ambient Water Quality Criteria (AWQC)) as mentioned in the text of the ROD to the figure for comparison with the groundwater concentrations. The existing figures show that, at some sample locations, VOCs were below Maximum Contaminant Levels for Drinking Water**

(MCLs), but the text of the ROD states that the A and B aquifers underlying the site are not considered drinking water. Therefore, MCLs are not relevant, suggest use AWQC. In addition, please include the analytical laboratory data qualifiers to the legend. Lastly, please include the groundwater flow direction on the figures.

**Response 35:** The requested changes were made, and information was provided in respective figures. In addition, Figures 7 and 8 were revised to include general indication and seasonal fluctuation of groundwater flow direction.

**Comment 36:** **Figure 9: The figure shows the air SWAT sampling locations which are all located in the northeastern corner of the landfill. It is unclear why samples were collected at this specific corner only. Please provide the rationale for selecting only this area for the air SWAT sampling.**

**Response 36:** The figure actually shows that the sampling locations cover the whole area of the landfill (refer to the landfill boundary on the figure). This confusion may have resulted from the scale of the figure. To rectify this, the image of the landfill was enlarged to show that the samples encompassed the entire landfill.

**Comment 37:** **Figure 13: For clarity, please indicate the thickness of each layer in the figure.**

**Response 37:** This figure is provided for conceptual purposes only to present the differences between the two multi-layer cap options proposed under Alternative 3.

**SAN FRANCISCO BAY REGIONAL WATER  
QUALITY CONTROL BOARD COMMENTS ON THE  
DRAFT RECORD OF DECISION FOR  
SITE 22 LANDFILL, REVISION 0  
MOFFETT FEDERAL AIRFIELD,  
MOFFETT FIELD, CALIFORNIA  
DELIVERY ORDER NO. 0088**

**DRAFT RECORD OF DECISION, SITE 22 LANDFILL**

Document dated: May 21, 2001

Comments by: Ms. Adriana Constantinescu dated July 12, 2001

Responses by: Naval Facilities Engineering Command, Southwest Division

**GENERAL COMMENTS (Ms. Adriana Constantinescu)**

**Comment 1:** This Record of Decision should include greater detail pertaining to institutional controls. Please forward a copy of the MOU between the Navy and NASA, cited as the mechanism for implementing institutional controls, for our legal review.

**Response 1:** The ROD will be revised to refer to the Navy's intent to enter into an MOA with NASA that will set specific institutional controls for the site; similar to what was done for Sites 1 and 2. The ROD will specify that the MOA will be officially adopted within one year of the authorization of the Final ROD. The MOA will include the following elements:

- Protection of the structural aspects of the landfill cap (biotic barrier);
- Prohibition of alterations to the drainage patterns or modification of surface contours;
- Establishing specific boundaries for the extent of the landfill;
- Prohibition of extraction of groundwater from the site;
- Prohibition of residential land use;
- Require regulatory approval for consideration of alternative land uses;
- Indicate the parties responsible for ongoing operations, maintenance and monitoring activities for the site; and
- Refer to how the MOA will be enforced with NASA and with their site-specific tenants.

**Comment 2:** In addition, State ARARs for evaluating groundwater and protecting species of concern (burrowing owls) should be added to Tables 17 and 18 of this document and the selection of Final ARARs (Table 18) needs further explanation.

**Response 2:** The California groundwater monitoring regulations of Title 22, 66264.91 (a)(1)(2)(3)(4)(b) and (c), 66264.93, 66264.94, 66264.97, 66264.98, 66264.99, and 66264.100, which address detection monitoring, evaluation monitoring, point of compliance, constituents of concern, concentration limits, and corrective action are considered Federal requirements and are referred to in Table 18 as the final and controlling ARARs for groundwater monitoring over several of the comparable and duplicative regulations listed as potential ARARs in Table 17.

Please refer to response to specific comment #16 regarding protection of burrowing owls.

### **SPECIFIC COMMENTS (Ms. Adriana Constantinescu)**

**Comment 1:** P. iv. Authorizing Signatures. Replace “To Be Determined . . .” with Loretta K. Barsamian, Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region.

**Response 1:** The revisions to the Authorizing Signature section have been made as suggested.

**Comment 2:** P. 1-2. Section 1.6 Site Description. Please include the dates that the landfill was active as part of this summary description.

**Response 2:** The active dates of the landfill (1950 to 1967) have been added to the revised ROD.

**Comment 3:** P. 5-3, second paragraph, last sentence. This sentence is not quite accurate and should be revised to make the following two points:

- 1) The San Francisco Bay Water Quality Control Plan (Basin Plan) identifies potential and beneficial uses of groundwater in the region (see p. 2.5 and Tables 2-8 and 2-9 of the 1995 Basin Plan). For the Santa Clara Valley Basin all four beneficial uses of groundwater (municipal/domestic, industrial process, industrial, and agricultural water supply) are listed as existing uses. However, at Site 22 none of these is an existing uses, although industrial and industrial process supply are potential uses, since treatment technologies can create the desired water quality (e.g. cooling water, hydraulic conveyance, fire protection, etc.). Municipal/ domestic and agricultural supply are neither existing nor potential uses due to elevated total dissolved solids (TDS). The preferred alternative will adequately protect industrial and industrial process supply beneficial uses of groundwater outside the landfill.
- 2) At Site 22, the primary concern is protection of beneficial uses of nearby surface waters (perimeter ditches, Northern Channel). Beneficial uses of

these water bodies are freshwater/estuarine habitat, as identified by the SF Bay Basin Plan. The threat to these surface waters is limited by geologic conditions (tight silt/clay soils), and the cap will further decrease the potential threat. Groundwater in wells at the perimeter of the landfill will be monitored to insure protection of beneficial uses. The water quality standards, promulgated by EPA for the State of California in the California Toxics Rule (based on EPA's ambient water quality criteria), will be used to evaluate groundwater monitoring data in the event that a release of contaminants is detected. See Tables 8-10 of this draft ROD for an example of how this comparison is made.

**Response 3:** Regarding sub-comment 3-1, Paragraph 2 on Page 5-3 was revised to include industrial service and industrial process supply water as potential beneficial uses of groundwater in the area.

The Navy disagrees with sub-comment 3-2 since protection of nearby surface waters was never identified as the "primary concern" for the site. However, as part of the remedy for the site, the Navy does plan to implement a post-remedial action groundwater monitoring program in accordance with Title 22, CCR, Sections 66264.91 (a)(1)(2)(3)(4)(b)&(c), 66264.93, 66264.94, 66264.97, 66264.98, 66264.99, and 66264.100, which address detection monitoring, evaluation monitoring, point of compliance, constituents of concern, concentration limits, and corrective action. The framework for the detection monitoring program and appropriate CCR references are provided in the ROD. The groundwater monitoring program will be referred to as a long-term groundwater monitoring plan. The plan will be further explained in the ROD, and the final details (approach for establishing concentration limits, monitoring frequency, etc.) will be established in this subsequent plan to be developed for approval of the regulatory agencies.

**Comment 4:** **P. 7-3, second paragraph. Please delete the phrase "the distance from Site 22 to the bay is over 1 mile." The ditches, Northern Channel and Cargill Evaporation Pond are all part of San Francisco Bay. The important point is that migration of contaminants to these water bodies is limited by the stratigraphy at Site 22.**

**Response 4:** The ROD was revised accordingly.

**Comment 5:** **P. 8-1. Remedial Action Objective. Since the human health risks are within the risk management range for residential use, an institutional control to prohibit residential use is needed as a remedial action objective. In addition, institutional controls to prevent human digging activities are needed.**

**Response 5:** Please refer to the response to General Comment No. 1 for more information on intended land use controls for the site.

**Comment 6:** **P. 9-4. Institutional Controls. This section needs to be expanded to explain how the previously signed MOU would address the specific institutional controls needed for Site 22. This MOU should be reviewed by the agencies before signing the ROD. Please provide a copy of this MOU as soon as possible for our review.**

**Response 6:** Please refer to the response to General Comment No. 1 for more information on intended land use controls for the site.

**Comment 7:** **Section 9.2.4. Please revise the fifth sentence. The groundwater monitoring program should evaluate whether there is a statistically significant increase over background levels for any waste constituent. Water quality protection standards, based on the California Toxics Rule and San Francisco Bay Basin Plan may be considered to determine the appropriate action if a release (contamination above background) is detected.**

**Response 7:** The Navy plans to implement a post-remedial action groundwater monitoring program in accordance with Title 22, CCR, Section 66264.91(a) (1)(2)(3)(4)(b)&(c), 66264.93, 66264.94, 66264.97, 66264.98, 66264.99, and 66264.100, which address detection monitoring, evaluation monitoring, point of compliance, concentration limits, and corrective action. The framework for the detection monitoring program and appropriate CCR references are provided in the ROD. The groundwater monitoring program will be referred to as a long-term groundwater monitoring plan. The plan will be further explained in the ROD, and the final details (approach for establishing concentration limits, monitoring frequency, etc.) will be established in this subsequent plan to be developed for approval by the regulatory agencies. The constituents of concern to be monitored for will be listed in the ROD and will consist of the constituents detected during the previous groundwater monitoring activities for the site as identified in the FS.

**Comment 8:** **P. 9-5. Either delete the reference to “16 samples annually” or provide a more specific rationale for the 16 samples. This rationale should include the specific wells that would be monitored, constituents monitored, and detection limits. It would be more appropriate to simply delete the reference, since the Navy has proposed to develop the monitoring plan during the RD/RA phase.**

**Response 8:** The reference to “16 samples annually” has been deleted.

**Comment 9:** **P. 10-2, second paragraph. Please revise the first sentence to state that implementation of institutional controls (access, digging, and use restrictions) is an additional remedial action objective for Alternatives 2 and 3.**

**Response 9:** The ROD has been revised accordingly.

**Comment 10:** P. 10-4, Section 10.2.2. The first sentence should be revised to add that chemical-specific standards are promulgated for adjacent surface waters, including the ditches along the perimeter of Site 22 and the Northern Channel. These standards were promulgated for the State of California by EPA in the California Toxics Rule (May, 2000) and should be used to determine contingency actions if groundwater monitoring indicates a release of contaminants from the landfill.

**Response 10:** The following text will be added to the ROD in Section 10.2.2 in discussion of the ARARs for the Site:

While the water quality standards contained in 40 C.F.R. § 131.36, 131.37, and 131.38 are relevant and appropriate or potentially applicable federal ARARs for groundwater cleanup response actions that discharge to surface water, these regulations are not applicable nor relevant and appropriate to the Site 22 remedial action since groundwater cleanup was not identified as an RAO for the site, and since there is no discharge of groundwater from the site to surface water.

**Comment 11:** P. 12-2, third bullet. Please revise to include restriction of residential use as an institutional control.

**Response 11:** Please refer to the response to General Comment No. 1 for more information on intended land use controls for the site.

**Comment 12:** P. 14-1. Ambient Water Quality Criteria (AWQC), promulgated by EPA for the State of California and Water Quality Objectives established by the San Francisco Bay Water Quality Control Plan (Basin Plan) are applicable ARARs. The reason for this is that the leachate poses a potential threat to adjacent surface waters (perimeter ditches and Northern Channel), so that the water quality standards promulgated in these regulations are used to develop a groundwater monitoring plan. In addition, the Basin Plan establishes beneficial uses of groundwater and surface water for the San Francisco Bay Region, pursuant to the Act of Porter-Cologne. These regulations should be cited and included in ARARs Tables 17 and 18.

**Response 12:** The RWQCB San Francisco Bay Basin Plan will be added to Table 18 as an ARAR for reference to beneficial uses of groundwater in the vicinity of the site. Specifically, the potential beneficial use of the groundwater as industrial service and industrial process supply water will be maintained under the remedial action performed for Site 22 and the surrounding groundwater shall not contain pollutant levels originating from the site that impair current or potential industrial uses.

The AWQC are a relevant and appropriate or potentially applicable federal ARAR for groundwater cleanup response actions that discharge to surface water, this regulation is not applicable nor relevant and appropriate to the Site 22 remedial action since groundwater cleanup was not identified as an RAO for the site, and since there is no discharge of groundwater from the site to surface water.

**Comment 13:** **Figure 15. The reproduction of this figure is poor, so that the stratigraphic layers cannot be differentiated. Please make sure that the figures in subsequent versions of this document are clear.**

**Response 13:** Noted.

**Comment 14:** **Table 16. EPA's Ambient Water Quality Criteria (AWQCs) are Federal ARARs that are applicable in groundwater monitoring, since a release of contaminants from the landfill could impair beneficial uses of adjacent surface water (perimeter ditches, Northern Channel, Cargill pond).**

**Response 14:** As described in Response to Comment No. 12, the AWQCs are not ARARs since there is no discharge of groundwater from the site to surface water. Please see Response to Comment No. 12.

**Comment 15:** **Table 17. The California Toxics Rule (CTR) and San Francisco Bay Basin Plan are State ARARs that are applicable in groundwater monitoring. The former is a promulgated regulation that establishes chemical-specific standards for protection of surface waters of the State of California. The Basin Plan establishes beneficial uses of groundwater and surface water, as well as narrative and chemical-specific objectives for protecting beneficial uses. The Record of Decision for OU1 correctly included the Basin Plan (the CTR had not yet been promulgated) (see Table 1 of the OU1 ROD). This Record of Decision should be consistent with the OU1 ROD.**

**Response 15:** As described in Response to Comment No. 12, the AWQCs and the CTR are not ARARs since there is no discharge of groundwater from the site to surface water. Please see Response to Comment No. 12.

The RWQCB San Francisco Bay Basin Plan will be added to Table 18 as an ARAR since it references beneficial uses of groundwater in the vicinity of the site. The Basin Plan water quality objectives and beneficial use designations will be considered, as appropriate, in developing the groundwater monitoring program. Specifically, the potential beneficial use of the groundwater as industrial service and industrial process supply water will be maintained under the remedial action performed for Site 22 and the surrounding groundwater shall not contain pollutant levels originating from the site that impair current or potential industrial uses.

**Comment 16:** **Tables 17 and 18. The ARARs for the California Department of Fish & Game should be included, particularly those which apply to actions that could impact burrowing owls. These include Fish & Game Code Section 3005, which prohibits the taking of birds and mammals, and Fish & Game Code Section 2014, which authorizes the State to collect damages for the taking of birds, mammals, fish, reptiles or amphibians.**

**Response 16:**

Biological resources and sensitive habitats at MFA were identified through various field reconnaissance surveys. Personnel from the NASA environmental resources group have also been contacted with respect to burrowing owls at MFA. The California Natural Diversity Database maintained by the CDFG was queried for site-specific sensitive species data. Based on this query, none of the Site 22 areas was identified to contain habitat that could support special-status species. However, the Burrowing Owl, which although not classified as a state or federal threatened or endangered species, is protected under the federal Migratory Bird Treaty Act and protected as a California species of special concern is known to inhabit the Site. As stated in the ROD, the Navy intends to follow the Burrowing Owl Mitigation measures discussed in the Department of Fish and Game guidance (Staff Report on Burrowing Owl Mitigation, October 17, 1995), as applicable. Therefore, Section 3005 of the California Fish and Game Code is not applicable because the project will not involve the take or possession of any birds or mammals by unlawful means. Also, Section 2014 of the California Fish and Game Code is not applicable since this does not pertain to a cleanup standard, standard of control, or other substantive requirement, criteria, or limitation.

**Comment 17:**

**Tables 17 and 18. The groundwater monitoring regulations cited in Table 18 as Final ARARs are not listed in Table 17 as Potential ARARs. Specifically, Table 18 lists 22 CCR 66264.100, 22CCR 66264.95 and 66264.97, 22 CCR Section 66264.98, and 22 CCR Section 66264.94 as relevant and appropriate. Yet these are not listed at all in Table 17 as potential ARARs. Please explain this apparent error and revise.**

**Response 17:**

Since the FS was finalized in 1999, the Navy has evaluated the various provisions of the groundwater monitoring regulations contained Title 22, Title 23, and Title 27 of the California Code of Regulations. The Navy's determination is that all of these regulations are essentially identical, and since the Title 22 regulations are considered "federal" requirements (authorized by EPA under RCRA), and are more stringent than the Title 40 CFR, Part 258 solid waste landfill groundwater monitoring requirements, they are considered the "controlling" ARAR for the site. Table 18 was developed to indicate the "final" ARARs, while Table 17 simply restates the "potentially applicable" ARARs that were included in the FS.

**Comment 18:**

**Tables 18. It is not clear why some regulations listed as potential ARARs were not selected as Final ARARs. Please provide the rationale for the Navy's selection of Final ARARs. Specifically:**

- **The State's 27 CCR regulations for groundwater monitoring were excluded from the Final ARARs Table.**
- **Three 27 CCR Section pertaining to gas monitoring (Section 20923, 20932, 21160) were excluded.**
- **Federal groundwater monitoring regulations (40 CFR 258.51(a)(c)(d); 258.53(a)-(f); 258.54(a)(b)) were excluded.**

- **Federal gas monitoring regulations (40 CFR 258.23) were excluded. Please provide the rationale for excluding these regulations from the final list, so that we can evaluate whether the Navy's selection is appropriate.**
- **The State's 23 CCR Sections 2520 and 2521 for Waste Identification were excluded**

**Response 18:**

Since the FS was finalized in 1999, the Navy has evaluated the various provisions of the specific ARARs listed in the FS as potential ARARs. In some cases, the listed ARARs contained citations to duplicative requirements and in other cases, the listed ARARs were not the most appropriate. Based on the Navy's re-evaluation, a list of controlling and "final" ARARs was developed and is included as Table 18 of the ROD.

Following are responses to the specific sub-comments to comment 18:

(a) The Title 27 groundwater monitoring regulations were deemed to be identical to the Title 22 groundwater monitoring regulations under Section 66264.91(a)(1)(2)(3)(4)(b)&(c), 66264.93, 66264.94, 66264.97, 66264.98, 66264.99, and 66264.100, which address detection monitoring, evaluation monitoring, point of compliance, constituents of concern, concentration limits, and corrective action. Since the Title 22 regulations are authorized by EPA under RCRA, they are considered Federal requirements and are therefore the controlling ARAR for the groundwater monitoring.

(b) The gas monitoring requirements referred to in Table 18 from Title 27 CCR, Section 20921 are the controlling ARAR and contain reference to all of the gas monitoring regulations of 20921 through 20937. Section 21160 simply references the monitoring period covered under Section 20921 through Section 20937

(c) The Federal groundwater monitoring regulations of Title 40 CFR, Part 258.51 were not included in Table 18, since these requirements are not more stringent than the Title 22 requirements which were included as explained in sub-comment (a) above.

(d) As stated in sub-comment (b), the gas monitoring regulations referred to in Title 27 CCR, Section 20921 through 20937 are the controlling ARARs since they are more stringent than the Part 258 requirements.

(e) The state Title 23 CCR, Section 2520 and 2521 for waste identification were not included in Table 18 as a final ARAR since they are not more stringent than the Title 22 hazardous waste regulations.

# FOSTER WHEELER

## FOSTER WHEELER ENVIRONMENTAL CORPORATION

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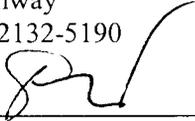
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TO: Contracting Officer  
 Naval Facilities Engineering Command  
 Southwest Division  
 Mr. Richard Lovering, 02R1.RL  
 1220 Pacific Highway  
 San Diego, CA 92132-5190

DATE: 08/03/01  
 DO: 0088  
 LOCATION: Moffett Fed. Airfield

FROM:

  
 Neil Hart, Program Manager

DESCRIPTION: Response to Comments on the Draft Record of Decision (ROD) for Site 22  
Landfill, 08/08/01

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